

# **Joint DoD/DoE Fuel Cell Program<sup>1</sup>**

Diane T. Hooie (dhooie@metc.doe.gov: 304-285-4524)

R. Diane Manilla (rmanil@metc.doe.gov: 304-285-4086)

U.S. Department of Energy

Morgantown Energy Technology Center

P.O. Box 880

Morgantown, WV 26507

## **Introduction**

In the Defense Appropriations Conference Report, dated September 26, 1994, Congress agreed to provide funding to the Department of Defense (DoD) for a competitive, cost-shared, near-term, Climate Change Fuel Cell Program. The responsibility for procurement, program management, and contract administration for these funds has been delegated to the Department of Energy, Morgantown Energy Technology Center (METC). The objectives of this program are to reduce greenhouse gas emissions through the efficient use of fossil fuels, to accelerate fuel cell commercialization for U.S. Manufacturers, and to satisfy the DoD goals for the environment, readiness, and economy, through activities which would stimulate end-user applications. Successful offers will demonstrate, through their applications, a commitment to purchase, install, operate, and maintain, fuel cell power plant(s) with a combined capacity rated between 100 and 3,000 kiloWatts (kW).

## **Approach**

In March 1996, a solicitation was released by the Morgantown Energy Technology Center for this grant. The value of this solicitation was approximately \$15 Million.

To qualify for review, the applicant's chosen fuel cell power plant must have been substantially manufactured in the United States (i.e., at least 50 percent of the value of the components must be produced in the U.S., and the fuel cell power plant must be assembled in the U.S.); the unit must not have been delivered to the site prior to the issuance of the solicitation, and must not have been purchased prior to the date of publication of the Congressional language. Applicants must be either an energy service provider, utility, or end user. The applicant could not be a fuel cell manufacturer or developer. The project must be between 100 kW and 3 MegaWatts (MW) in size.

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The solicitation package which included the Solicitation, the Application/Information Package and all amendments were made available through METC's Home Page and on diskette. In order to meet the needs of all potential applicants, the Application/Information Package was developed so that the applicant could simply fill out the forms and sign the certifications as appropriate for their requirements. To expedite the evaluation and selection process, applications are currently being evaluated in multiple rounds.

The Climate Change Fuel Cell Program Solicitation Package will be available to the public through March 1997 contingent upon the availability of additional funding.

The technical evaluation team, comprised of representatives of DoD and DoE, reviewed all qualified applications and provided recommendations to the Source Selection Official. Applications were evaluated according to the following criteria:

- 1) Firmness of Financial Commitment. Firmness of the applicant's proposed funding sources for the project as evidenced by the commitment of the organizations providing funding assistance to the program and the estimated contribution of each.
- 2) Site Information. Intended use of thermal and electrical energy, type of operation (grid connected or grid independent), Environmental, Safety and Health issues, construction/installation issues and arrangements, firmness of site selection (letter of intent from end user and installation site authority).
- 3) Project Plans and Schedule. Reasonableness and adequacy of project plans (schedules and milestones) as evidenced by the planned completion date for key milestones for the installation and operation of the fuel cell power plant. All projects must begin operation within three years of award date and operate for at least one year.
- 4) Cost. The total project costs, which include unit cost, delivery, installation, and one year of operation will be reviewed for reasonableness and cost realism.

The Source Selection Official then made the final selections for award which included program policy factors. The program policy factors gave, in descending priority, those projects providing energy service to: DoD installations - U.S., DoD installations - foreign, non-DoD installations - U.S., and non-DoD installations - foreign. In addition, the diversity of the projects was considered.

## **Results**

The first round of applications have been evaluated and the selections made and announced. Additional rounds have been evaluated but are not reported here since the selections have not yet been made.

A total of 34 applications were qualified for review in the first round. The value of these applications was \$9.7 Million. Of these, 21 have been already selected for award. The value of these applications is \$5.4 Million. One has been withdrawn by the applicant.

Of the applications evaluated, there were 44 ONSI PC25C units and one Fuel Cell Engineering 2.4 MW unit. The applicants were about evenly divided between utilities, end users, and energy service providers with three at DoD sites.

The applications provided the desired diversity and identified sites throughout the United States, with the greatest concentration in the northeast, which is a non-attainment area. The electrical energy is to be used for military base housing, military base utility, office buildings, hotel convention center, high tech research and development facility, medical facility, manufacturing processing, utility, and remote generation. In addition, two sites will be for premium power applications. The thermal energy will be used for process heat, space heating, boiler feed preheat, domestic hot water, and pool heating. Additional diversity was shown in the fuels to be used. Most applications are to be fueled by natural gas; however, three applications will utilize anaerobic digester gas and one application will be fueled by propane. One unit was "transportable" for testing at four different sites.

## **Conclusion**

The units selected meet the DoD goals for the environment, readiness, and economy. In addition, they satisfy the DoE goals of accelerating fuel cell commercialization by stimulating a variety of end use applications. If funding is available, the solicitation will continue during FY 1997.

## **Contract Information**

This solicitation was sponsored by the Department of Defense (Environmental Security) and administered by the U.S. Department of Energy's Morgantown Energy Technology Center under solicitation DE-PS21-96MC33099. For more information, contact R. Diane Manilla, Contract Specialist, phone (304) 285-4086 or fax (304) 285-4469, or electronic mail [rmanil@metc.doe.gov]. Copies of the Solicitation Package is available on METC's Home Page on the Internet [<http://www.metc.doe.gov/business/solicita.html>]